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NOTES ON GEOGRAPHIC DISTRIBUTION

New distribution records of the genus *Neotroponiscus* Arcangeli, 1936 (Isopoda: Oniscidea: Bathytropidae) from Southeastern and Southern Brazil

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ABSTRACT: Three species of the terrestrial isopod genus *Neotroponiscus* Arcangeli, 1936 have new records presented in this paper. *Neotroponiscus lenkoi* Lemos de Castro, 1970, previously known only from the state of São Paulo, is recorded for the first time from the state of Rio de Janeiro. Two other species, *N. argentinus* (Giambiagi de Calabrese, 1939) and *N. lobatus* Lemos de Castro, 1970 have complementary records from the states of Santa Catarina and Espírito Santo, respectively. A distribution map is also presented.

Terrestrial isopods (Oniscidea) include 38 families, most of them recorded from the Neotropics (Souza *et al.* 2010), and occur in almost all terrestrial habitats worldwide (Magrini *et al.* 2010). According to Pérez-Schultheiss (2010), the family Bathytropidae includes ten genera and 25 species, and could be characterized by the antennular flagellum 2-articulate and the absence of pleopodal lungs.

The terrestrial isopod genus *Neotroponiscus* Arcangeli, 1936 is mainly characterized by presenting medium body size, commonly well pigmented, dorsally covered by spines, tubercles or ribs, strongly convex medially, head with medial and lateral lobes strongly developed, with frontal margin medially carinate, eyes well developed, protruding, with numerous ommatidia, maxilliped endite with two curved spines at the disto-lateral angle, pereon bearing enlarged epimera, subquadrate to subrectangular, epimeral glands occasional, pleonites 3 to 5 enlarged, prominent, following the edge of pereon, pleotelson with lateral margins strongly convergent at its anterior third, being the peduncle of uropod visible dorsally (Lemos de Castro, 1970a). According to Schmalfuss (2003) there are eight species grouped in this genus: *N. argentinus* (Giambiagi de Calabrese, 1939); *N. carolii* Arcangeli, 1936 (type-species); *N. daguerrii* (Giambiage de Calabrese, 1939); *N. lenkoi* Lemos de Castro, 1970; *N. littoralis* Lemos de Castro, 1970; *N. lobatus* Lemos de Castro, 1970; *N. perlatus* Lemos de Castro, 1970; and *N. plaumanni* (Andersson, 1960). All species are recorded in Brazil, being *N. argentinus* and *N. daguerrii* recorded also in Argentina and *N. plaumanni*, in Uruguay (Souza-Kury 1998; Schmalfuss 2003).

Recent surveys at the Parque Nacional da Tijuca (municipality of Rio de Janeiro), Reserva Biológica Duas Bocas (municipality of Cariacica, state of Espírito Santo), and in the municipalities of Blumenau, Corupá and São João Batista, state of Santa Catarina, result in the collection of three species of the genus *Neotroponiscus* that represent important new or complementary records of these species in the Southeastern and Southern Brazil, including the first record of *N. lenkoi* from the state of Rio de Janeiro (Figure 1). All collections were made by hand-search.

The examined specimens are preserved in ethanol 70% and housed at the Crustacean collections of the *Museu Nacional*, *Universidade Federal do Rio de Janeiro* (MNRJ) and *Departamento de Zoologia*, *Universidade Federal do Rio Grande do Sul* (UFRGS). All samples were collected with authorizations of the *Instituto Chico Mendes de Conservação da Biodiversidade* (ICM-Bio) (MMA 18571 and MMA 32349).

Neotroponiscus argentinus (Giambiagi de Calabrese, 1939)

Material examined: 1 male, 2 females, São João Batista, state of Santa Catarina, Brazil, 27°15'51"S, 48°51'12"W, 26/VI/2012, in forest remnant near residences, Araujo, P.B. col., UFRGS 5468; 1 male, Blumenau, state of Santa Catarina, Brazil, 27°01'44"S, 49°05'30"W, 27/VI/2012, in forest remnant near residences, Araujo, P.B. col., UFRGS 5469; 1 male, Corupá, Santa Catarina state, Brazil, 26°25'23"S, 49°05'30"W, 27/VI/2012, in forest remnant near the church, Araujo, P.B. col., UFRGS 5470.

The type-locality of *N. argentinus* is Punta Lara, Buenos Aires Province, Argentina, but this species is considered being distributed from Recife, in the Brazilian state of Pernambuco, to La Plata, Argentina, with records from the states of Espírito Santo, Rio de Janeiro, São Paulo and Santa Catarina (Souza-Kury 1998). This species was previously recorded from the state of Santa Catarina (Andersson 1960; Boss *et al.* 2012), only in "Nova Teutonia, Itá" (precise

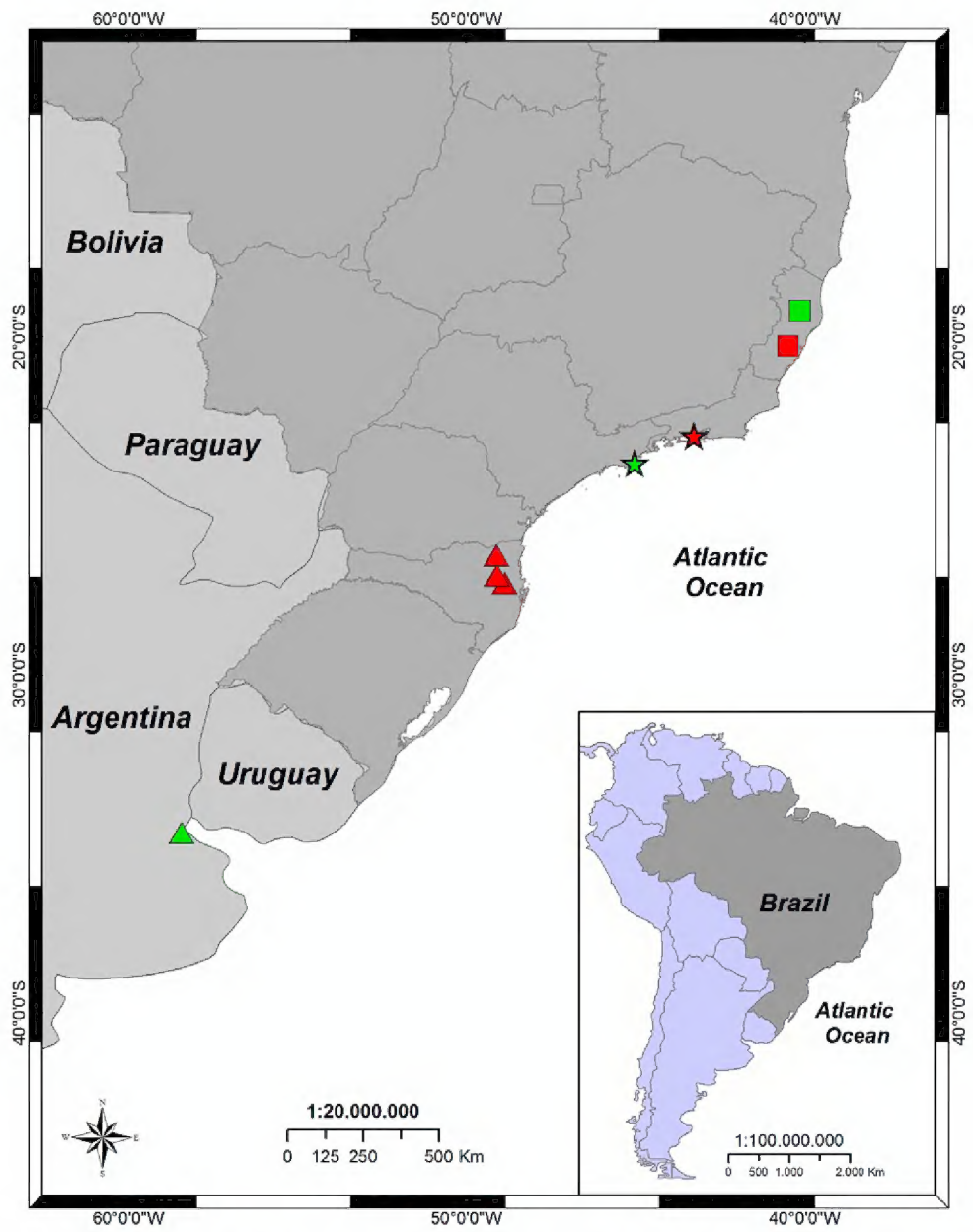

Figure 1. Distribution map indicating the type-localities (green) and the new records (red) of *N. argentinus* (triangles), *N. lenkoi* (stars) and *N. lobatus* (squares).

locations unknown), a region where, nowadays, is located the Machadinho Hydroelectric Power Plant. This finding confirms the occurrence of *N. argentinus* and increases the knowledge of the distribution of this species in this state.

***Neotroponiscus lenkoi* Lemos de Castro, 1970** (Figure 2)

Material examined: 1 male, 6.4 mm, Parque Nacional da Tijuca, Tijuca River, between the entrance of the park and the Taunay Waterfall, Rio de Janeiro, state of Rio de Janeiro, Brazil, 350 m of altitude, 22°57'36"S, 43°16'34"W, 01/VII/2012, in stream, among rocks, Mugnai, R. col., MNRJ 23405; 3 specimens, 3.0 mm, 4.2 mm, and 4.5 mm, -/-/1959, Parque Nacional da Tijuca, Cleide, M. col., MNRJ 7597; 1 specimen, 5.0 mm, -/-/1979, Gruta de Paulo e Virgínia, Parque Nacional da Tijuca, Cleide, M. col., MNRJ 7598; 1 specimen, 5.5 mm, -/IV/1973, Parque Nacional da Tijuca, Arlé, R. col., MNRJ 7599.

Neotroponiscus lenkoi was originally described by Lemos de Castro (1970b) from Ilha de Vitória, coast of the state of São Paulo, with material collected by the entomologist Karol Lenko, for whom he dedicated this species. This species could be easily differentiated from the others in the genus because of its unique pattern of coloring with the first and fourth tergites unpigmented, body weakly armed with tubercules and proportionally wider than in other species, as well as the median cephalic lobe also proportionally enlarged.

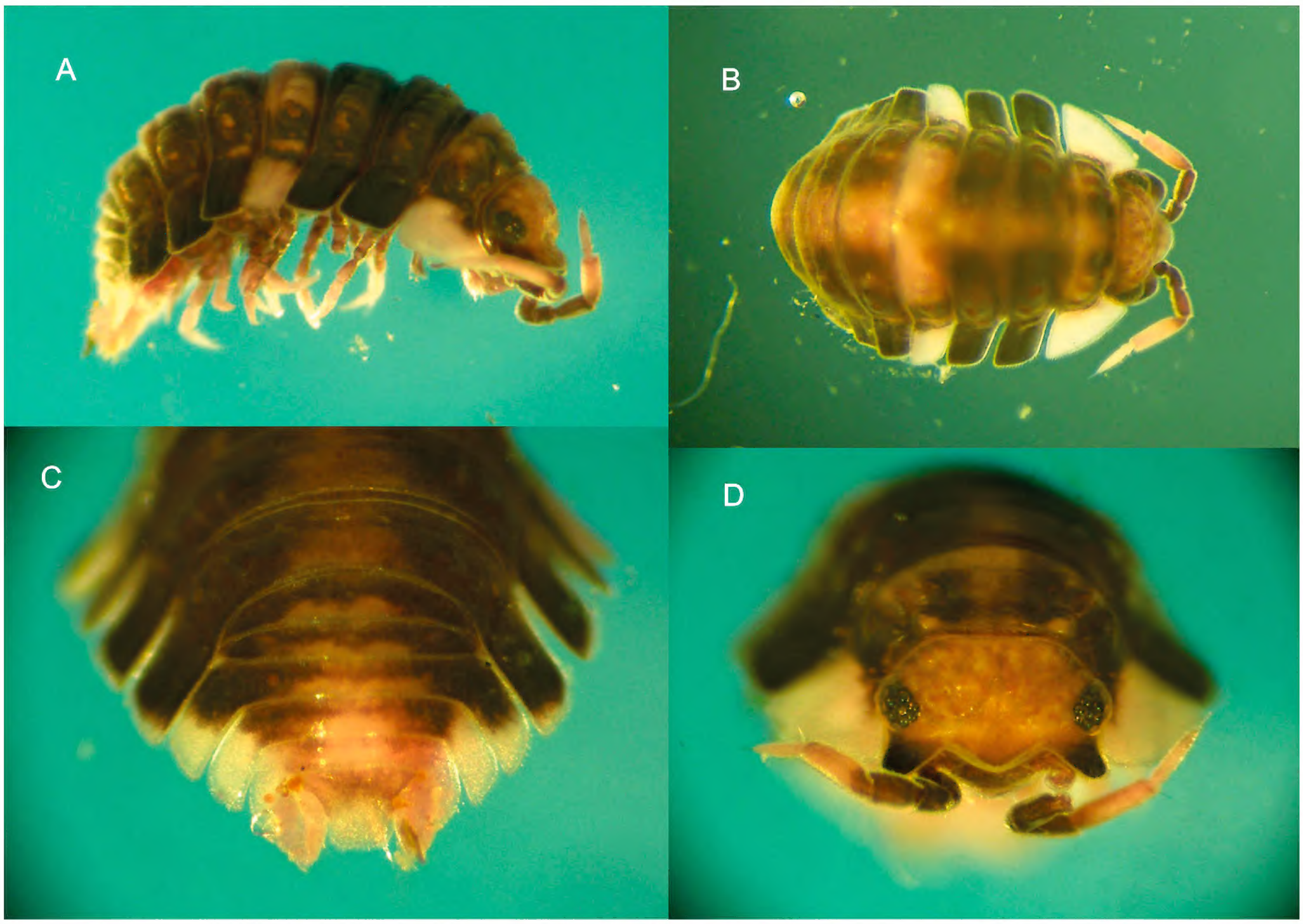

Figure 2. *Neotroponiscus lenkoi* Lemos de Castro, 1970: male, 6.4 mm, collected at Parque Nacional da Tijuca, Rio de Janeiro, state of Rio de Janeiro, Brazil, 22°57'36"S, 43°16'34"W, 01/VII/2012, in stream, among rocks, MNRJ 23405: A) Lateral view; B) Dorsal view; C) Posterior view; D) Frontal view.

A single specimen was accidentally collected in the National Park of Tijuca during an expedition of the project *Composição de comunidades e padrões sazonais biogeoquímicos em águas intersticiais hiporréicas em ecossistemas de riachos subtropicais do Estado do Rio de Janeiro*. The other specimens, also from the National Park of Tijuca, were collected in 1959, 1973, and 1979, but were never recorded until now. These specimens lost almost completely their pigmentation because of the long time they were preserved in ethanol, but is still possible to observe the changing in the pattern of coloration in the first and fourth tergites.

We observed two morphological variations, when compared the Tijuca's specimen and the illustrations of Lemos de Castro: 1) the pattern of pigmentation of antenna (Tijuca – proximal articles pigmented and distal articles unpigmented; Ilha de Vitória – proximal articles unpigmented and distal articles pigmented); and 2) apical margin of pleotelson (Tijuca – roughly truncate; Ilha de Vitória – slightly convex). This is the first record of this species from the state of Rio de Janeiro.

Neotroponiscus lobatus Lemos de Castro, 1970

Material examined: 1 female, 4.5 mm, Reserva Biológica Duas Bocas, Cariacica, state of Espírito Santo, Brazil, 20°16'S, 40°28'W, 09/X/2006, Araujo, P.B. and Anza, J. col., UFRGS 4252.

As *N. lenkoi*, *N. lobatus* was never recorded after its original description by Lemos de Castro (1970b), from the municipality of Sooretama, state of Espírito Santo. *Neotroponiscus lobatus* is characterized by the medial cephalic lobe anteriorly and horizontally projected, epimera of pereonites strongly developed, and pleotelson posteriorly elongate, without longitudinal carina. This is the second record for this species, extending its geographic distribution to the municipality of Cariacica, also in the state of Espírito Santo, more than 150 km southwards.

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Literature Cited

Andersson, A. 1960. South American terrestrial isopods in the collection of the Swedish State Museum of Natural History. *Arkiv för Zoologi* ser. 2, 12(34): 537-570.

Boss, H., G. Bond-Buckup, L. Buckup, P.B. Araujo, C. Magalhães, M.P. Almerão, R.A. Santos and F.L. Mantelatto. 2012. Checklist of the Crustacea from the state of Santa Catarina, Brazil. *Check List* 8(6): 1020-1046.

Lemos de Castro, A. 1970a. Isópodos terrestres do gênero *Neotroponiscus* Arcangeli (Oniscidae – Bathytropinae). *Anais da Academia Brasileira de Ciências* 42(1): 89-95.

Lemos de Castro, A. 1970b. Quatro espécies novas de isópodos terrestres do gênero *Neotroponiscus* Arcangeli (Oniscidae – Bathytropinae) do Brasil. *Boletim do Museu Nacional* 275: 1-15.

Magrini, M.J., P.B. Araujo and M. Uehara-Prado. 2010. Crustacea, Isopoda, Oniscidea Latreille, 1802: New continent record and distribution extension in Brazil. *Check List* 6(2): 217-219.

Pérez-Schultheiss, J. 2010. Familias de isópodos terrestres (Crustacea: Isopoda: Oniscidea) de Chile: sinopsis y clave de identificación. *Boletín de Biodiversidad de Chile* 4: 63-82.

Schmalfuss, H. 2003. World catalog of terrestrial isopods (Isopoda: Oniscidea). *Stuttgarter Beitrage zur Naturkunde*, Serie A, 654: 1-34. Revised and Updated Version accessible at http://www.oniscidea-catalog.naturkundemuseum-bw.de/Cat_terr_isop.pdf

Souza, L.A., A.R. Senna and A.B. Kury. 2010. A new species and first record of *Gabunillo* Schmalfuss & Ferrara, 1983 (Isopoda, Oniscidea, Armadillidae) from the Neotropics. *Zootaxa* 2677: 1-14.

Souza-Kury, L.A. 1998. Malacostraca - Peracarida. Isopoda. Oniscidea; p. 653-674 *In* P.S. Young (ed.). *Catalogue of Crustacea of Brazil*. Rio de Janeiro: Museu Nacional.

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